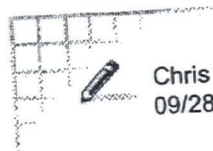


ADMINISTRATIVE
RECORD

1264109 - R8 SDMS

~~Scott~~
1.06.07.00
Human Health
Risk Assessment



Chris Weis
09/28/99 08:40 PM

To: Scott Brown/MO/R8/USEPA/US@EPA
cc: Suzanne Bohan/ENF/R8/USEPA/US@EPA

Subject: Finalization of the E Helena Risk Assessment

1 of 4 related
memos
(No. 2 of 4)

Scott and Suzanne,

Attached is a memo describing the outcome of our review of the PRP risk assessment and addendum (1995 and 1998 respectively). Please take a look at it for your purpose of finalizing the ROD. If there are minor changes which I can make that will better address your needs please let me know.

I'm off to Washington tomorrow and will return on Monday to finalize the memo.

Suzanne, Scott has seen the ISSI comments. If you would like to review them they are on the top of my desk.

Cheers,

Chris



Risk Memo.w

1060700

465487



MEMORANDUM

SUBJECT: Risk Assessment Finalization for the East Helena Smelter NPL Site

FROM: Christopher P. Weis, Ph.D., DABT.
Regional Toxicologist

TO: Scott Brown, Ph.D.
Remedial Project Manager

I have, once again, reviewed the 1995 human health risk assessment for the East Helena Smelter NPL site (Kleinfelder, 1995). We had previously reviewed and discussed the risk assessment internally and shared our findings at public meeting in East Helena in 1995. Additionally, I have reviewed the 1998 addendum to the risk assessment submitted to EPA Region 8 by Hydrometrics in 1998. The 1998 risk assessment addendum was submitted by Hydrometrics in an effort to determine the possible impacts on human health risk if only homes where children currently lived were addressed by soil removal and replacement.

In general, I find that the risk assessment conducted by Kleinfelder (1995) was according to Agency policy and is acceptable for health risk-based decision-making at the site. Like all PRP-developed risk assessments, some specific language in the risk assessment text may not be completely consistent with language normally used by the Agency when describing human health risk. However, the quantitative aspects of Kleinfelder's risk calculations are correct and usable for Agency risk management decision-making within the usual constraints of biological uncertainty.

By contrast, the addendum submitted by Hydrometrics (1998) is seriously flawed. There are numerous technical errors including; 1) omissions of critical exposure factors for the arsenic risk assessment resulting in 10-30 fold underestimations of risk; 2) childhood risk evaluations which are not appropriately averaged across time; and 3) incorrect absorption adjustments for cadmium. Given the large number of errors in the 1998 addendum, I recommend not using it for any decision-making purposes at the site.

In addition to my review of the assessment, I have asked our Program Support contractor, ISSI, Inc. to review the risk assessment and addendum for compliance with standard Agency risk assessment practice. The results of their review are attached for your information.

If you wish to discuss the results of our review of the risk assessment, please call me at 303.312.6671.

cc: P. Schmittziel
S. Bohan